

PELVIC FLOOR DISORDERS IN FEMALE VETERANS

What a difference an X Makes

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Christine L. G. Sears MD

CDR MC USN

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Topics:



- Urinary Tract Infection and related symptoms
- Pelvic Organ Prolapse
- Urinary Incontinence
- Bladder Pain Syndrome
- Graphics non intrusive
- Discuss Active Duty as well (tomorrow's veterans)



Urinary Tract Infections and Related Symptoms

Urinary Tract Infection: Background

- Common, affects quality of life
- Total cost estimates in US:
 - 500 million (direct care)
 - 1 billion (indirect)

Urinary Tract Infection: Veterans

Urologic Disease Burden in the United States: Veteran Users of Department of Veterans Affairs Healthcare

Jennifer T. Anger, Christopher S. Saigal, MingMing Wang, Elizabeth M. Yano, and the Urologic Diseases in America Project

- Prevalence of UTI was 4265 and 1719 per 100,000 F:M (4.3% and 1.7%)
- Similar to prior estimates

Urinary Tract Infection: Active Duty

- Survey sent to Army and Navy Units
- 841 women
- 18.4% reported UTI while deployed
- Study hypothesized poor hygiene and access to care problematic

Dysuria (painful urination)

Acute Dysuria among Female Soldiers

Guarantor: COL Gary D. Davis, MC USA

Contributors: MAJ Todd S. Albright, MC USA; MAJ Alan P. Gehrich, MC USA; MAJ Jerome L. Buller, MC USA;
COL Gary D. Davis, MC USA

- Case Controlled Study 120 with dysuria, 126 without
- Female soldiers with dysuria more likely to avoid fluids and postpone voiding
- Magnified in field duty
- No studies in deployment

Dysuria (painful urination)

- Anecdotally, common (with urinary frequency) among women and men during deployment
 - Healthcare system burden
 - May be reduced via education if behavioral
- Area for research
- Need to repeat study on deployed women



Pelvic Organ Prolapse

Pelvic organ prolapse: Background

- Definition: Descent of bladder, uterus, and rectum because vaginal support has weakened
- Known risk factors:
 - ❑ Vaginal deliveries
 - ❑ Multiple deliveries
 - ❑ High birth weight deliveries
 - ❑ Chronic cough – increase in intra-abdominal pressure
 - ❑ Obesity
 - ❑ Genetic factors
 - ❑ Often noted after menopause
 - ❑ Manual Labor

Pelvic organ prolapse: Active Duty

Wilma I Larsen • Trudy A Yavorek

Pelvic organ prolapse and urinary incontinence in nulliparous women at the United States Military Academy

- Observational study at United States Military Academy (West Point).
- Mean age 19.6
- 50% had some loss of support on examination
 - 46% stage 1
 - 6% stage 2
 - >90 % anterior (bladder)
- Similar to Australian Study of non military

Pelvic organ prolapse

Pelvic prolapse and urinary incontinence in nulliparous college women in relation to paratrooper training

W. L. Larsen • Trudy Yavorek

- Follow up on USMA study same patients
- 37 attended paratrooper training
 - Statistically more likely to have Stage 2 prolapse
 - Cases 1 Control 2 pre-training
 - Cases 14 Controls 11 post-training
 - Statistically more likely to increase in prolapse stage
 - Mean descent after paratrooper training 0.5 cm

Pelvic Organ Prolapse Summary



- Demonstrated descent after strenuous training
- Implication for future impact on female veterans
- Recommended area of future study



Urinary Incontinence

Urinary Incontinence: Background

- Leakage of urine
 - Stress incontinence: cough, sneeze, laugh, jump, exercise
 - Urge incontinence: “when you gotta go”
- Rates vary with age

Urinary Incontinence: Veterans

Urologic Disease Burden in the United States: Veteran Users of Department of Veterans Affairs Healthcare

Jennifer T. Anger, Christopher S. Saigal, MingMing Wang, Elizabeth M. Yano, and the Urologic Diseases in America Project

- Prevalence of urinary incontinence:
 - 2161 (F) and 515 (M) per 100,000
 - 2.2: 0.5
- Study looked at primary diagnosis

Urinary Incontinence: Active Duty

Wilma I Larsen • Trudy A Yavorek

Pelvic organ prolapse and urinary incontinence in nulliparous women at the United States Military Academy

- 19% had incontinence
 - 43% Stress incontinence
 - 28.5% Mixed incontinence
 - 28.5% Urge incontinence
- More common with running as aerobic activity

Urinary Incontinence

Pelvic prolapse and urinary incontinence in nulliparous college women in relation to paratrooper training

W. L. Larsen • Trudy Yavorek

- 22 (15%) had prior to training (7 paratroopers)
- 24 (21%) had after training (10 paratroopers)
 - 54% Stress incontinence
 - 8% Mixed incontinence
 - 38 % Urge incontinence
- Not statistically significantly different

Prolapse and Incontinence Summary

- In active duty, baseline prolapse and incontinence same as general population
- More incontinence among runners
- After paratrooper training, prolapse worse, incontinence the same
- Areas for future study:
 - Long term effects ?
 - Does this translate to other high impact environmental exposures?



Bladder Pain Syndrome

Bladder Pain Syndrome: Background

- Classic Term : Interstitial Cystitis
- Syndrome of pain with bladder filling
- Prevalence depends on definition used
- Prevalence in general female population 2.7 to 6%

Bladder Pain Syndrome: Veterans

Research article

Open Access

Prevalence and trends of selected urologic conditions for VA healthcare users

Min-Woong Sohn^{*1,2}, Huiyuan Zhang^{1,2}, Brent C Taylor³,
Michael J Fischer^{1,4}, Elizabeth M Yano⁵, Christopher Saigal⁶,
Timothy J Wilt^{3,7} and the Urologic Diseases in America Project

- Cohort study of all VA beneficiaries 18 and older who used inpatient or outpatient VA care at least once from 1999-2002
- Used VA database as well as Medicare claims files
- Conditions counted when “primary diagnosis”

Bladder Pain Syndrome



- Increased in prevalence from 1999 -2002
- Female: Male ratio 2:1 (2.2:1.3)
- More research needed

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Research summary

- Women are playing an ever increasing role in the US military, representing about 15% of active military personnel, 17% of reserve and National Guard forces, and 20% of new military recruits. Concurrently, women are one of the fastest growing groups of new users in the Department of Veterans Affairs (VA) Healthcare System, with particularly high rates of utilization among veterans of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). Of the more than 100,000 OEF/OIF women veterans, over 44% have enrolled in the VA system for health care². Thus, women veterans represent an integral part of the veteran community.

Backup slides: UTI, Lowe Study

Symptoms of vaginitis and urinary tract infections are miserable, distracting, and significantly affect women's quality of life. Among civilian women, these symptoms account for 10.5 million office visits per year. To examine the scope of the problem for military women during deployment situations, surveys were sent to randomly selected Army and Navy units. Of 841 women who completed the anonymous survey and had been deployed, vaginal infections were experienced by 30.1% and urinary tract infections by 18.4% of them during deployment. Vaginal symptoms were consistent with symptoms associated with the three most common vaginal infections (candida, bacterial, and trichomonas vaginitis). A variety of risk factors, both behavioral and situational, significantly differentiated women with and without infections. Urinary tract infections and vaginal infections are common during deployment situations where resources for self-care and appropriate primary health care for women are scarce or unavailable. One solution is a self-diagnosis and treatment kit for deployed military women.

Backup slides Sohn Study

Bladder Cancer	29,725	938	(928 – 948)	33,016	926	(916 – 936)	39,345	942	(932 – 952)	44,397	943	(933 – 953)
Kidney Cancer	7,777	217	(213 – 222)	8,692	220	(215 – 224)	10,345	227	(222 – 231)	11,878	233	(229 – 238)
Renal Mass	42,725	1,209	(1,198 – 1,220)	52,117	1,317	(1,305 – 1,328)	66,790	1,444	(1,432 – 1,455)	82,287	1,584	(1,571 – 1,596)

Interstitial Cystitis	42,638	1,195	(1,184 – 1,206)	49,710	1,256	(1,245 – 1,267)	61,500	1,344	(1,332 – 1,355)	69,469	1,358	(1,347 – 1,370)
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